Sony International (Europe) GmbH S00P5132EP00J PAE00-033TRDE

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Claims

- 1. Device for generating, from incoming signal values $(X_{i,n})$, soft-values $(Y_{i,n})$ to be input into a channel decoder (22) of a communication device for use in a wireless communication system, comprising:
- truncation means (24, 26, 28) for truncating said incoming signal values $(X_{i,n})$ such as to fall within a predetermined limit value range, and
- normalization means (30, 32) for normalizing said truncated signal values $(X_{i,n}^t)$ such as to fit to an input range of said decoder (22),

characterized in

that said truncation means (24, 26, 28) are adapted to determine the boundaries of said limit value range in dependence on information representative of a signal-to-noise ratio of said incoming signal values $(X_{i,n})$, and in that said truncated signal values $(X_{i,n})$, after normalization, are output as said soft-values $(Y_{i,n})$.

2. Device according to claim 1,

characterized in

that said truncation means (24, 26, 28) are adapted to calculate, from said incoming signal values $(X_{i,n})$, an absolute mean value (m) and to determine said boundaries of said limit value range based on said absolute mean value (m) multiplied by a scaling factor (α) , said truncation means (24, 26, 28) being adapted to determine said scaling factor (α) dependent on said information representative of said signal-to-noise ratio.

3. Device according to claim 2,

characterized in

that said truncation means (24, 26, 28) are adapted to determine said scaling factor (α) such as to obtain a greater limit value range when said signal-to-noise ratio is low and to obtain a smaller limit value range when said signal-to-noise ratio is high.

- 4. Method for generating, from incoming signal values $(X_{i,n})$, soft-values $(Y_{i,n})$ to be input into a channel decoder (22) of a communication device for use in a wireless communication system, comprising the steps of:
- truncating said incoming signal values $(X_{i,n})$ such as to fall within a predetermined limit value range, and
- normalizing said truncated signal values $(X_{i,n}^t)$ such as to fit to an input range of said decoder (22),

characterized by

the step of determining the boundaries of said limit value range in dependence on information representative of a signal-to-noise ratio of said incoming signal values $(X_{i,n})$, and outputting said truncated signal values $(X_{i,n}^t)$, after normalization, as said soft-values $(Y_{i,n})$.

5. Method according to claim 4,

characterized by

the step of calculating, from said incoming signal values $(X_{i,n})$, an absolute mean value (m) and determining said boundaries of said limit value range based on said absolute mean value (m) multiplied by a scaling factor (α) , said scaling factor (α) being determined dependent on said information representative of said signal-to-noise ratio.

6. Method according to claim 5,

characterized by

the step of determining said scaling factor (α) such as to obtain a greater limit value range when said signal-to-noise ratio is low and to obtain a smaller limit value range when said signal-to-noise ratio is high.